OSS Applications

Programming, Coding and Diagnosis of BMW and MINI Vehicles via the Internet

Installation Guide

V1.3.2
July 2011

1 Introduction

Online Service System (OSS)

The OSS has been developed specifically for independent automotive workshops to provide an extensive range of resources. The following applications are now available:

- **ISTA**
  - **Vehicle Diagnostics**
  - **Display of Technical Information**:
    - Repair Instructions, Technical Data, Tightening Torques
  - **Wiring Diagram System:**
    - Wiring Diagrams, Pin Assignments
    - Installation Locations
    - Connector Views
- **WebISTA**
  - Easy to use web interface*
  - Provides repair manuals and wiring diagrams for models from E36

    *Does not require the installation of the OSS application software. Adobe SVG viewer is required.
- **ISTA/P**
  - Vehicle Coding and Programming
- **Commercial Service Data (KSD)**

  With WebKSD, you can view the number of flat rate units corresponding to each repair. Based on the vehicle identification number or by selecting the series and model, you can view the flat rate unit data for defined scopes of repair work.

  - Approved wheel/tire combinations, Summer and winter tire recommendations
  - Snow chain recommendations
- **Technical Support**
  - OSS Software Installation and operational support.

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1.1 Explanation of Symbols

In this User's Guide the symbols below have the following meanings:

WARNING

The "Warning" symbol alerts you to the fact that the indicated task or activity could lead to personal injury.

ATTENTION

The "Attention" symbol identifies tasks and activities that could lead to equipment or property damage.

NOTE

The "Note" symbol identifies text passages in which factors such as closely following the prescribed procedures assume special importance for preventing undesirable or unexpected results.

INFORMATION

The "INFORMATION" symbol indicates a reference to supplementary documentation.

Update

The "Update" symbol indicates a new or updated addition to the documentation.

1.2 Important Safety Information

Before proceeding to use the OSS software you should always read and understand the applicable safety precautions while also carefully observing the notices and instructions in this user's guide.

Warning

Certain ISTA functions have the ability to activate components within the connected vehicle. When activating components always ensure that no persons are present within any area in which personal hazards could arise during the ensuing process. Always observe all universally-applicable safety rules and precautions.

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2 Overview of the Online Service System for BMW Service and MINI Service (OSS)

The OSS consists of a PC or laptop connected to BMW over the Internet. To connect to the vehicle you can use the BMW authorized diagnostic interface "integrated communication optical module (ICOM)" or use the default device "Pass Thru Tool (PTT)".

As the first step you will need to download several software components from the OSS portal and install them on your PC. This step is necessary because it allows your PC to operate together with the ISTA server at BMW AG as a client. No offline operation is possible.

Note

The OSS link will only operate with PCs that are not connected through a proxy server or other intermediary that requires authentication. Thus an Internet connection through a LAN is possible provided that no additional entries of user name/password are required.

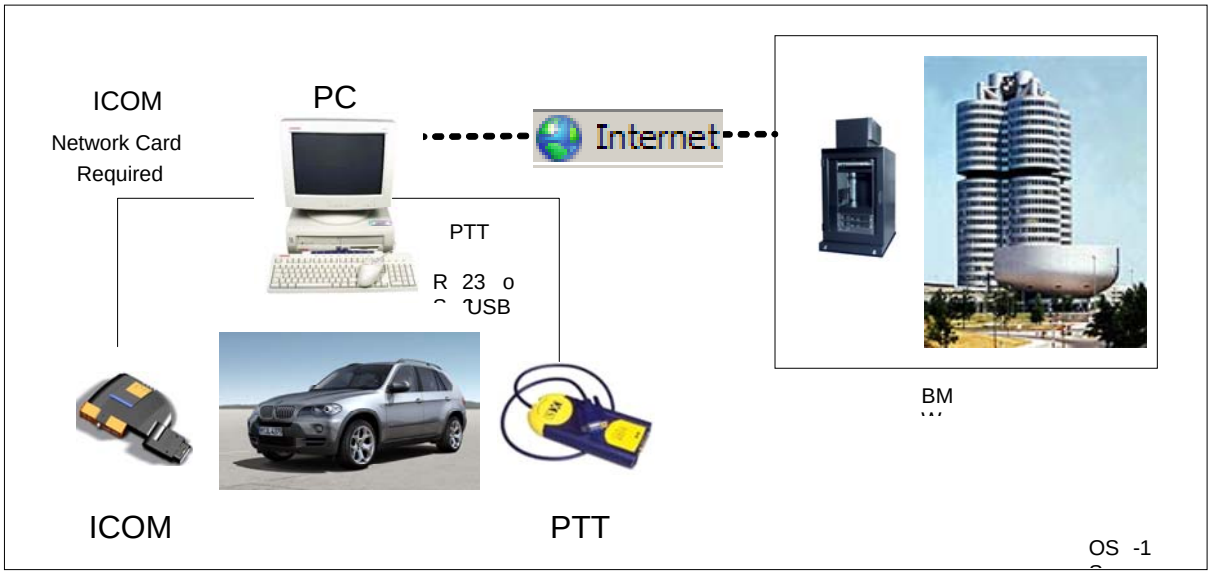

Figure 2.1 Overview: ISTA-Workshop System

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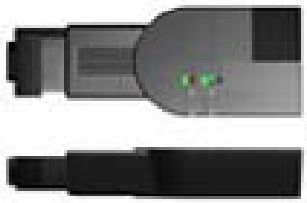
2.1.1 Integrated Communication Optical Module (ICOM)

The ICOMs are the interfaces for the repair of BMW and MINI vehicles recommended by BMW. The ICOM is specifically designed for BMW and MINI vehicles. The ICOM incorporates powerful processors and a high storage capacity. This allows for faster communication than with a PTT.



There are three different ICOM components available. These can handle all vehicles of the BMW Group:

- ICOM A for OBD communication
- ICOM B, in combination with the ICOM A, for MOST communication
- ICOM C, in combination with the ICOM A, for 20 PIN diagnostic connector.

2.1.1.1 Connection of the ICOM to Vehicle

Note

Switch on the ignition (Terminal 15) before connecting the ICOM to the vehicle.

Connecting the ICOM to the OBD interface

Connect ICOM A directly to the computer's unused network port. No other equipment or multiple port hubs should be connected between the ICOM and the computer. Connect the ICOM A OBD connector to the OBD socket in the vehicle. The ICOM A OBD connector can be folded to an angle to adapt it for use in the wide variety of OBD socket locations encountered in various vehicles.

Using the ICOM with the MOST port

The supplementary ICOM B module will also be required to connect the vehicle's MOST port. Proceed by attaching the USB ports from ICOM A and ICOM B to the USB cable. Then connect ICOM A directly to the computer's unused network port. Complete the process by connecting ICOM B to the vehicle's MOST port through the MOST connector while also plugging the ICOM A OBD connector into the vehicle's OBD socket. If the system subsequently fails to recognize the MOST port or the ICOM, please repeat the process.

ICOM 20 Pin connection

Connect the ICOM to the network port on the PC first. Then connect the ICOM C to the ICOM A. Finally, connect the ICOM C to the vehicle 20 Pin diagnostic connector.

Waiting period for recognition of an ICOM

It can take up to 15 minutes before an ICOM is detected after the connection to the PC. It is advisable to connect the ICOM immediately after boot up of the PC, and then start the OSS software..

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2.1.2 Pass Thru Tool (PTT)

If a PTT is to be used it must meet the standard SAE J2534.

Attention

Never use a wireless PTT for programming purposes. Even the briefest of interruptions during data transmission can cause permanent and irreparable damage to control units.

Two drivers, the BMW PassThruD driver and the PTT manufacturer's own specific driver, are needed to work with PTT. The required BMW PTT driver is available in the OSS download section.
The required PTT manufacturer's driver must be obtained from the PTT manufacturer and then installed according to the manufacturer's instructions. The most recent driver must always be used.

2.1.2.1 BMW Group specific adapter and cable

Some vehicles will require additional adapters for vehicle diagnosis/programming. Consult your PTT manufacturer regarding the availability of such adapters.

BMW 20 Pin Adapter

The following vehicles require the 20 pin adapter :

- 323i Sedan from MY 1998, 323i Coupe/Cabrio from MY 1999
- 328i, 330i from MY 1998, 328i, 330i Coupe/Cabrio from MY 1999
- 528i, 530i, from MY 1998
- 540i from MY 1997
- 740i from MY 1997
- M3 Coupe/Cabrio from MY 1999
- M Roadster/Coupe from MY 2000
- Z3 Roadster 2.8/3.0 from MY 1998
- X5 from MY 2001

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BMW 7-8 Pin Adapter

- The following vehicles require pins 7-8 of the OBD connector to be bridged for vehicle communication.

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2.1.2.2 Connection of the PTT to the Vehicle

Start by connecting the USB cable or RS232 cable directly to the computer, then proceed to connect it to the PTT. Do not use a USB hub. Connect the correct diagnostic cable to the PTT and then finish by making the in-vehicle connection.

2.1.2.3 Vehicle not supported by PTT Use

The following vehicles cannot communicate with a PTT :
E31 (ab MJ 1996)
E34 (ab MJ 1996)
E36 (318i, BJ 09/93-04/99)
Diagnostics/programming is possible with the OSS and ICOM.

2.2 Power Supply

Attention

Without a stable electrical power supply, the program may abort and programming errors can occur.

It is not possible to program vehicles starting with the E65 Series (7-Series starting in 11/2001) without an external power supply. Chargers with the following performance data, adjusted to the prescribed settings, are required for the power supply:

- F-Series and E-Series with "Efficient Dynamics": The unit should never exceed the preset maximum voltage of 14.8 volts in its battery-charging mode. During the programming routine the battery-charging mode is used on the chargers (for instance, "DBL1200", "DBL1600", "MultiCharger 1500").
- E-Series without "Efficient Dynamics": Chargers (for instance, "DBL800", "MultiCharger 750") with microprocessor-controlled monitoring functions and charge-management that adapts to the vehicle's current draw may be used. Select "FSV" external power-supply mode (to ensure that a consistent voltage level is maintained throughout the programming routine). **Never exceed the maximum voltage of 14.2 volts.** It may be necessary to reset the charging
  parameters.
  All approved chargers may be purchased from API International at 1-512-280-4391

2.3 Internet Connection

A consistent and stable Internet link is essential, as otherwise the program can abort and programming errors can occur. Ensure that a stable Internet connection is maintained for the entire duration of your OSS session. Depending upon vehicle equipment level and condition, the programming routine can last as long as several hours in a process entailing transmission of multiple megabytes. The Internet provider should ensure that the IP address is not changed during the session. Internet requirements are listed in section 3.1

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3 Installation of the OSS Software

3.1 System Requirements

The following system requirements must be met for proper OSS software installation and operation:

Function	Prerequisite
Operating System	Microsoft Windows XP Professional®, 32-Bit, with Service Pack 2 or higher Microsoft Windows Vista® Business, 32-Bit, Service Pack 1
Graphics	Resolution 1024 x 768 Pixel, min. 256 Colors
Memory	Min. 2 GB
Hard Drive	80 GB free space
CPU	CPU better than Pentium IV©, clock frequency min. 2 GHz
Internet Access	When using the ICOM: • LAN Internet connection with a speed of at least 2 Mbit/s and latency of less than 50ms while connected to the OSS server. • Additional network card for ICOM connection. When using an SAE-J2534 PassThruTools (PTT): • LAN Internet connection with a speed of at least 2 Mbit/s and latency of less than 50ms while connected to the OSS server. • One free RS 232 or USB port. **Satellite, GSM and WLAN connections are not supported**
Browser	MS Internet Explorer® Version 6 or 7
Application	**SUN Java Runtime Environment®, JRE 6 Update 5 or greater** Available from the internet address http://java.sun.com/products/archive/j2se/6u5/index.html **Microsoft .NET 2.0 with Service Pack 2** • **Please note**: .NET from Version 3.5 installed automatically .NET 2.0, but not .NET 2.0 Framework Service Pack 2. This must be additionally installed, available from the internet address http://www.microsoft.com/downloads.
User account	Administrator privileges on the computer used for this application. Administrator privileges are not only required to complete the installation; **they are also needed during standard OSS operation.**

Additional information is located in the FAQ section at the end of this manual.

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3.2 Settings

The Internet settings and the application itself can both be affected by system programs running in the background. To avoid problems during the vehicle session, settings must be configured for "Display Properties" and "Monitor power".

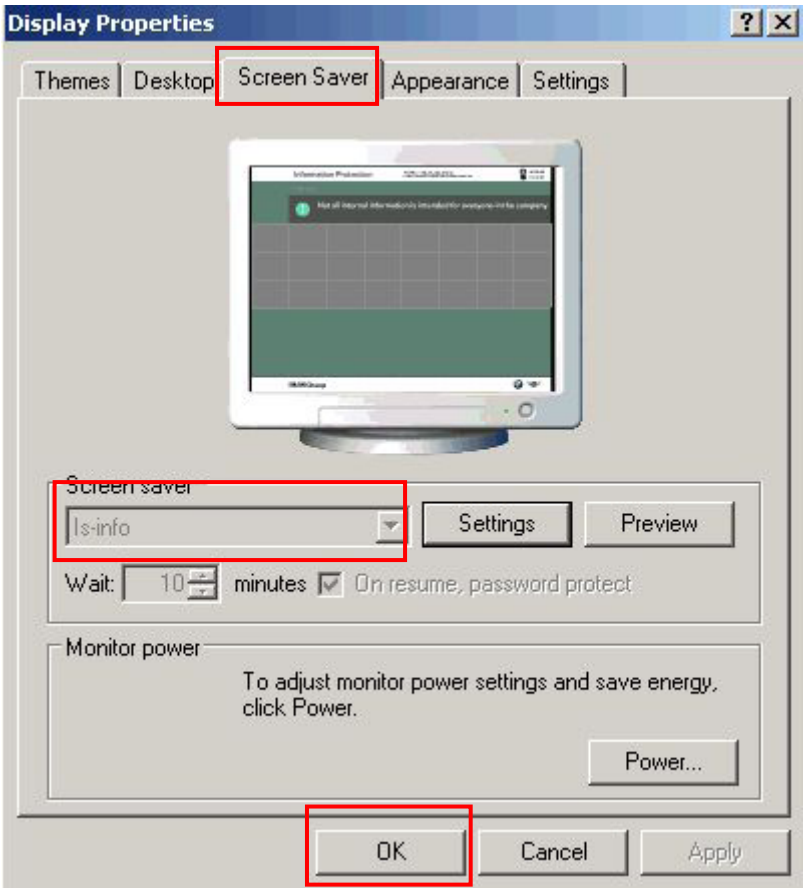
3.2.1 Display and screen saver properties

To set the display properties, proceed as follows:

- "Start > Settings > Control Panel > Display"

The "Display Properties" dialogue box is displayed.

- Select the "Screen Saver" index tab



- Select "(None)" as the screen saver
- Acknowledge with "OK".

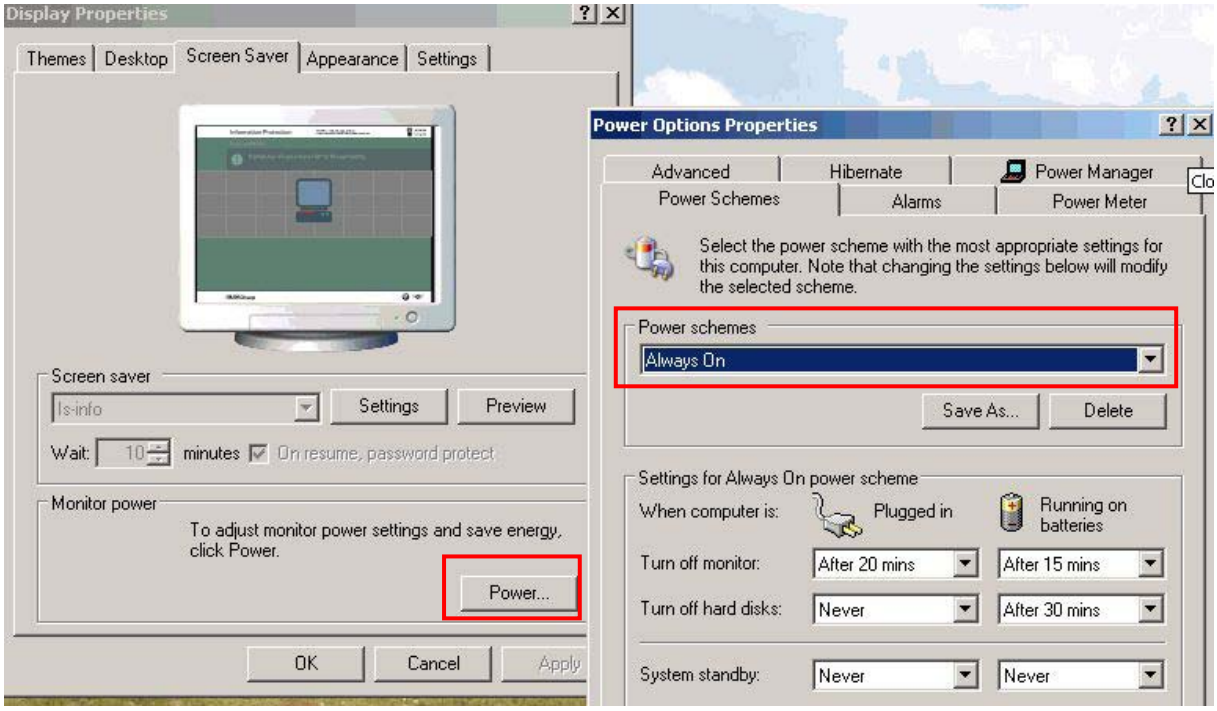
3.2.2 Power management

To set the power options properties, proceed as follows:

- "Start > Settings > Control Panel > Display"

The "Display Properties" dialogue box is displayed.

- Select the "Screen Saver" index tab
- Select "Power…"



The "Power Options Properties" are displayed.

- Select the "Power Schemes" index tab
- Select the "Always On" power scheme
- Acknowledge with "OK".

NOTE

Always use an A/C adapter when using a laptop. Never program the vehicle in battery mode.

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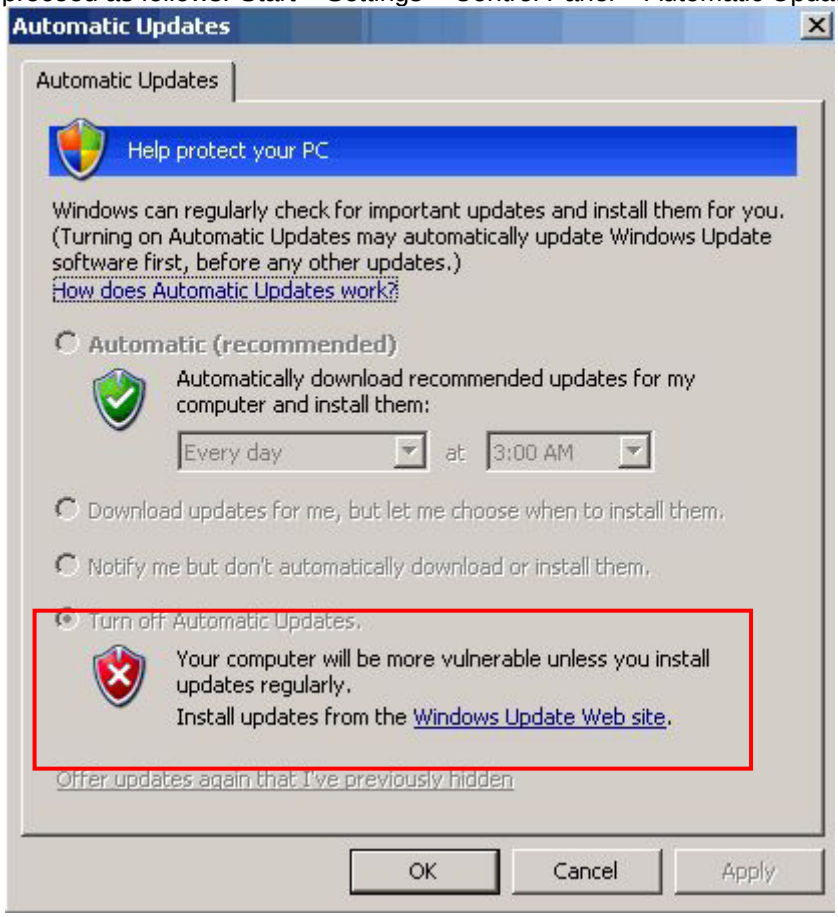
3.2.3 Automatic updates

Turn off Automatic Updates **during programming**. To set the "Automatic Updates" properties, proceed as follows:"Start > Settings > Control Panel > Automatic Updates"


Automatic Updates
Automatic Updates
Help protect your PC
Windows can regularly check for important updates and install them for you. (Turning on Automatic Updates may automatically update Windows Update software first, before any other updates.)
How does Automatic Updates work?
Automatic (recommended)
Automatically download recommended updates for my computer and install them:
Every day
at
3:00 AM
Download updates for me, but let me choose when to install them.
Notify me but don't automatically download or install them.
Turn off Automatic Updates.
Your computer will be more vulnerable unless you install updates regularly.
Install updates from the Windows Update Web site.
Offer updates again that I've previously hidden
OK
Cancel
Apply

The "Automatic Updates" dialogue box is displayed.

- Select "Turn off Automatic Updates"
- Acknowledge with "OK"
- Turn on "Automatic Updates" after programming.

3.2.4 Browser settings

To ensure that installation of the individual components can be run, it is necessary to make some configurations to the browser used (Microsoft Internet Explorer 6/7). Refer to the following chapters for the required settings to the corresponding browser. Dialogue boxes may be displayed during installation. These must be observed and acknowledged.

3.2.5 Turning off pop-up blocker

To turn off the pop-up blocker, proceed as follows:

- Start the browser
- Select "Tools > Pop-up Blocker > Turn Off Pop-up Blocker".

Once the pop-up blocker has been deactivated, "Turn On Pop-Up Blocker" is displayed in the submenu item.

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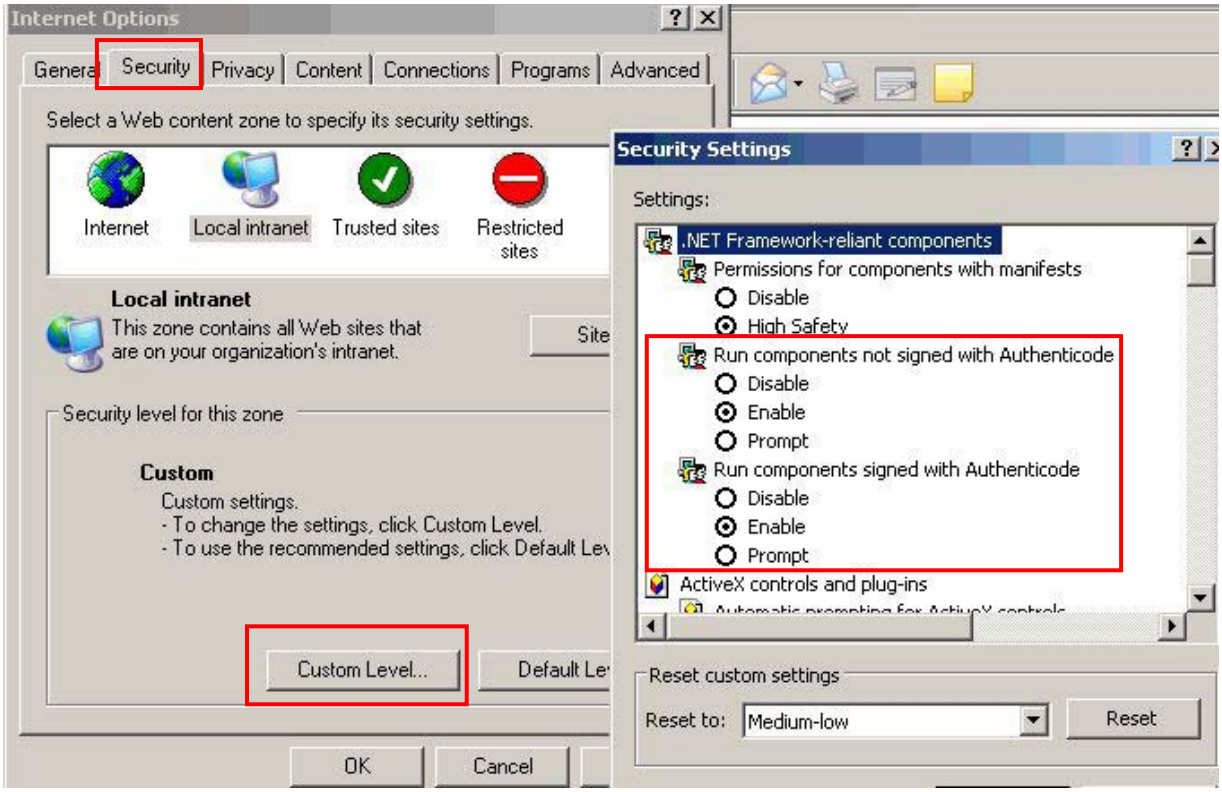
3.2.6 Security settings

To set the security settings properties, proceed as follows:

- Select "Tools > Internet Options"

The "Internet Options" dialogue box is displayed.

- Select the "Security" index tab
- In the "Security level for this zone" box, select "Custom Level…"



The Security Settings dialogue box is displayed.

- "Enable" the following settings in ".NET Framework-reliant components":
- Run components signed with Authenticode
- Run components not signed with Authenticode
- Acknowledge "OK"

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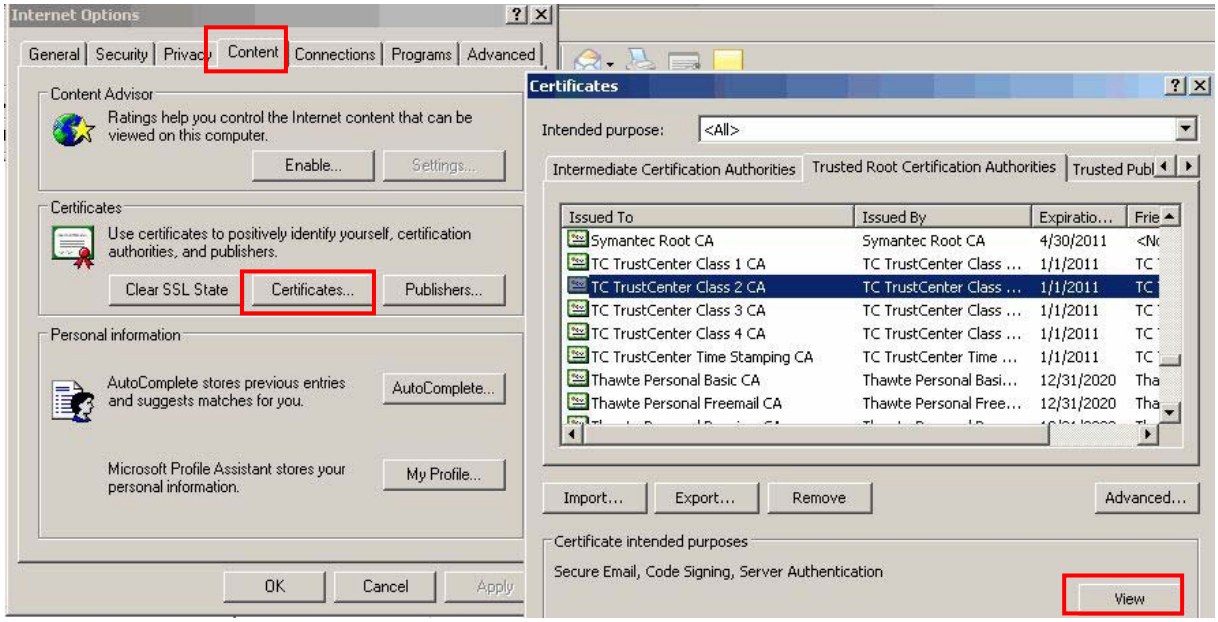
3.2.7 Certificates

To set the certificates properties, proceed as follows:

- Select "Tools > Internet Options"
- The "Internet Options" dialogue box is displayed.
- Select the "Content" index tab
- In the Certificates field, select "Certificates"

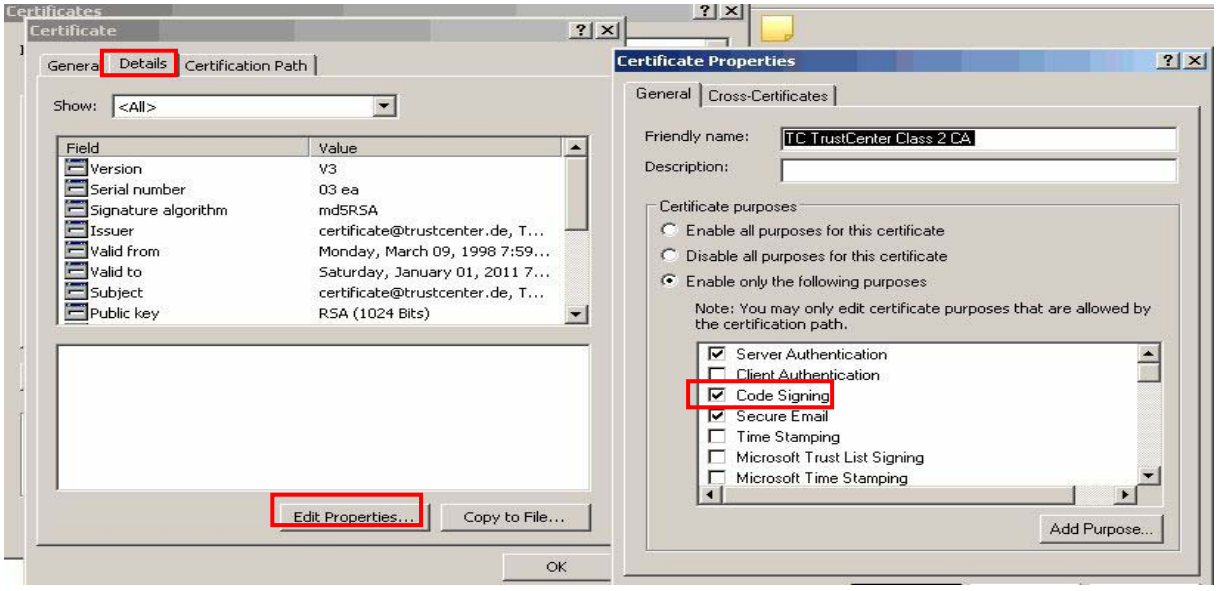


The Certificates dialogue box is displayed.

- Select the "Trusted Root Certification Authorities" index tab
- Select the "TC TrustCenter Class 2 CA" certificate
- Select "View"

The "Certificate" dialogue box is displayed.

- Select the "Details" index tab
- Select "Edit Properties…"



The "Certificate Properties" dialogue box is displayed.

- Insert a check/tick symbol in the "Code Signing" selection box

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- Acknowledge with "OK".

NOTE

If you are using a firewall, information about the firewall software may be displayed. Note the information and click "Confirm."

NOTE

Bluetooth connections can cause programming aborts that, in turn, cause programming errors. Disable Bluetooth connections.

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3.3 Software Installation Process

The installation procedure consists of two steps:

1. Installation of platform software
   - Install manufacturer-specific PTT driver*
   - ICOM Firmware install**
   - BMW PTT driver download and install*
   - OMS software download and install
   - ISTA client download and install
   - KSD client download and install

   *Not required for ICOM use
   ** Not required for PTT use

2. Completion of the software installation via the Internet
   - ISTA*
   - ISTA/P*
   - KSD*

   *Refer to corresponding manuals in the download section for more details.

NOTE

Installation of components must be completed in the order listed above.

NOTE

Installation of software components make entries in the start menu. Start ISTA only from the OSS website link not the Start menu .

NOTE

If your PC has anti-virus or firewall software installed, you must allow access to the Internet during installation and operation .

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3.3.1 Install the manufacturer's PTT driver

Install the PTT driver in accordance with the manufacturer's instructions. This driver is available from the PTT manufacturer. It will usually be available through the download section on the manufacturer's homepage..

NOTE

Always use the current PTT driver for programming. Install the latest PTT driver before performing programming .

3.3.2 BMW PassThruD (bmwptt_*.exe) installation

Where * is the actual version number.

The BMW PassThruD driver is required when using the PTT diagnostic interface .

To install the BMW PTT driver do the following :

- Click on the Link "BMW PTT-Driver"

"File download" dialog box appears. The installation file BMW PassThruD (bmwptt_ * .exe) can be executed directly or saved and then run .

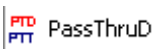
Direct execution :

- Acknowledge "Run"
- The installation file BMW PassThruD (bmwptt_ * .exe) begins the installation.
- "Security warning" dialog box appears
- Acknowledge "Run"
- Select Setup language and confirm with "OK"

Save and run the installation file :

- Confirm "Save"
- Select the directory and file (e.g. C\temp)
- Open selected directory (e.g. C\temp) and start "bmwptt_ * .exe".
- Select Setup language and confirm with "OK"
- Choose destination folder and confirming with "Next"
- Select Start menu folder and confirm with "Next"
- Information will be checked, if necessary, correct and confirm with "Install"
- Confirm with "Finish"

Verification: it is made the following entry in Control Panel, "Software":



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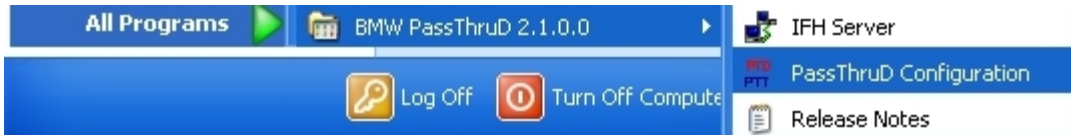
3.3.3 Select PTT drivers (Default PTT)

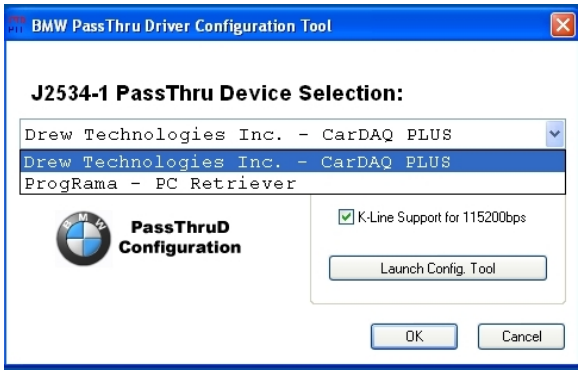
If PTTs from different manufacturers are being used, it is important to ensure that you always use the correct driver for the device that is currently connected.

To select the manufacturer's own proprietary driver, proceed as follows:



- Start > All Programs >BMW PassThru_* > PassThruD

The current selected driver will be shown:



- Choose the appropriate driver and confirm with "OK".

3.3.4 ICOM Firmware Installation

Click the ICOM Firmware link to download the ICOM software.
Double click the ICOM.msi file.
Click "Run"
Click on "next >"
Click "install"
Click "Finish" button

3.3.4.1 Installing OMS

OMS should be installed as replacement for WSM Online:

ISTA Workshop system (ISTA) _ from version 2.26
Programming (ISTA/P) _from version 2.42.2

You do not need to uninstall WSM Online; the OMS will do this automatically. Please note that the OMS does not work with older versions of the BMW-PTT-driver or the ICOM firmware.

Installation steps:
1. Download BMW PTT drivers and install bmwptt*.exe
2. Update your ICOM-Firmware if you have a ICOM. Download ICOM*.msi and install.
3. Install OMS: Download OMS-OSS*.msi and install.
4. Restart your PC

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3.3.5 Completion of the software installation via the Internet

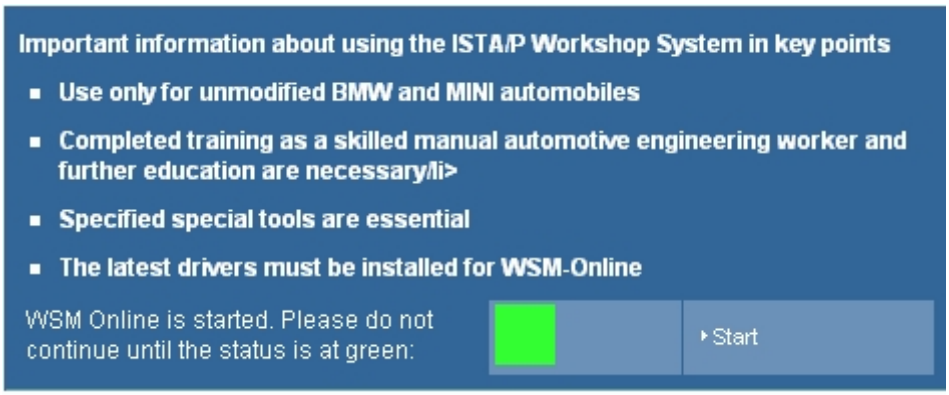
- ISTA/P
- ISTA
- KSD

3.3.6 ISTA/P Installation

To install ISTA/P, proceed as follows:

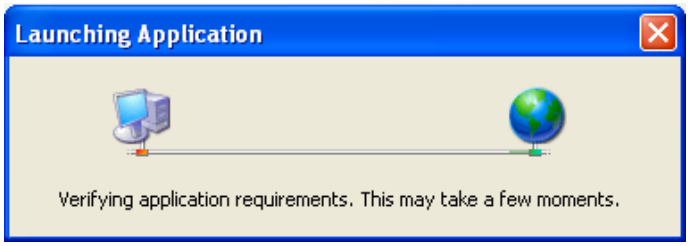
- Click the ISTA/P Online Link

The ISTA/P start page is displayed


Important information about using the ISTA/P Workshop System in key points
Use only for unmodified BMW and MINI automobiles
Completed training as a skilled manual automotive engineering worker and further education are necessary/li>
Specified special tools are essential
The latest drivers must be installed for WSM-Online
WSM Online is started. Please do not continue until the status is at green:
Start

- When the "Status" box changes to green, select "Start". If the "Status" box does not change to green, close the window and start again.
- Check and acknowledge the safety instructions

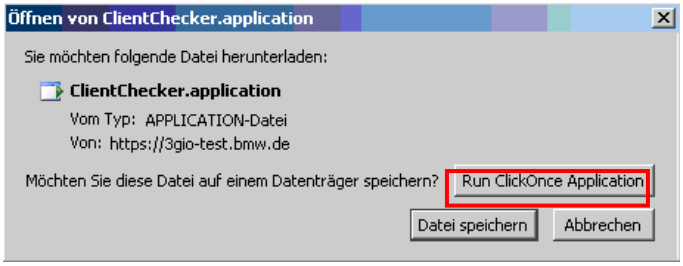
Once "Start" has been acknowledged, the "Launching Application" dialogue window is displayed.



First start of ISTA/P Online

When ISTA/P Online is started for the first time the .NET application "ClientChecker" is downloaded. The ClientChecker checks the system requirements, and installs and starts ISTA/P Online.

The ClientChecker dialogue box is displayed.



- Acknowledge "Run ClickOnce Application". The application is started.

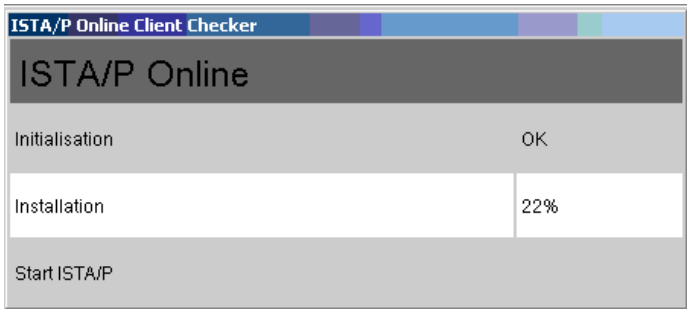
A security warning is displayed.

Application Run - Security Warning
Do you want to run this application?
Name: 3GIO ClientChecker
From: 3gio-test.bmw.de
Publisher: BMW Group
Run
Don't Run
While applications from the Internet can be useful, they can potentially harm your computer. If you do not trust the source, do not run this software. More Information...

- Acknowledge "Run". The ISTA/P ClientChecker is installed and started.

ISTA/P Online is started

After the ClientChecker has been installed or if ISTAP Online has already been started once, the ISTA/P Online ClientChecker dialogue box is displayed.



ISTA/P Online is initialized, installed and started.

Windows security warning

During starting several ISTA/P Online programs are blocked by the Windows firewall.

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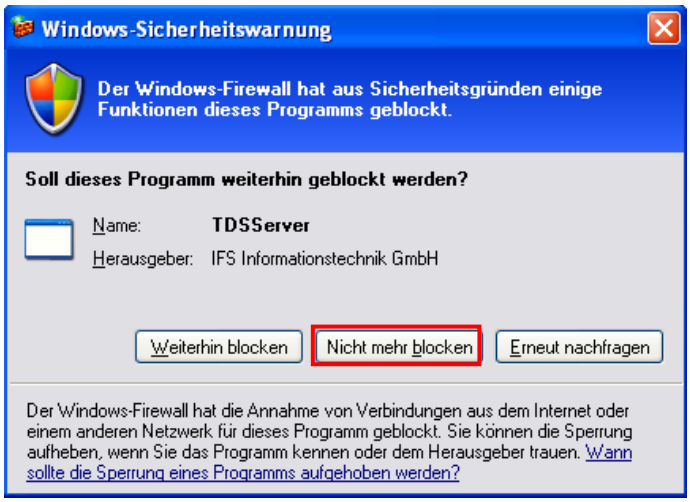
Windows-Sicherheitswarnung
Der Windows-Firewall hat aus Sicherheitsgründen einige Funktionen dieses Programms geblockt.
Soll dieses Programm weiterhin geblockt werden?
Name: TDSServer
Herausgeber: IFS Informationstechnik GmbH
Weiterhin blocken
Nicht mehr blocken
Erneut nachfragen
Der Windows-Firewall hat die Annahme von Verbindungen aus dem Internet oder einem anderen Netzwerk für dieses Programm geblockt. Sie können die Sperrung aufheben, wenn Sie das Programm kennen oder dem Herausgeber trauen. Wann sollte die Sperrung eines Programms aufgehoben werden?

- To run ISTA/P Online, select "Unblock" for the following programs:
  - Castor
  - Idmon
  - ISOMInstance
  - Pollux
  - TaurusAdministration
  - TaurusClient
  - TaurusServer
  - TaurusServices
  - TDSServer

Note: The above-mentioned programs are required during vehicle programming. They communicate during vehicle programming via local network ports. If you change these, the Windows security warnings are repeated. Select "Unblock" again.

Refer to the ISTA/P User Guide for additional information

3.3.6 ISTA Installation

NEW

Before starting the ISTA application the WSM Online and ISTA client software must be installed.

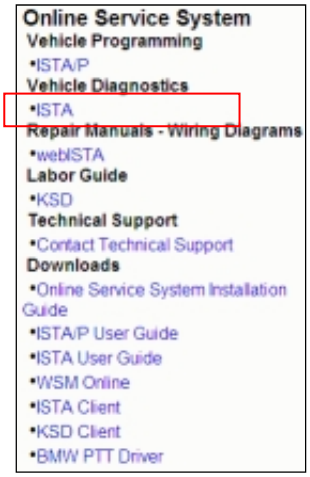

Fig. 1

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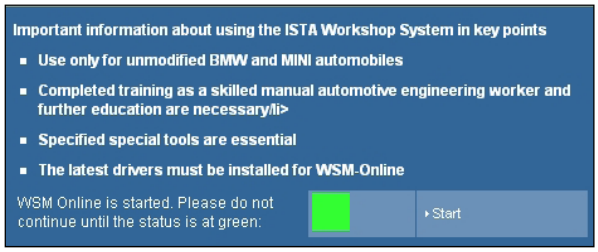
Important information about using the ISTA Workshop System in key points
Use only for unmodified BMW and MINI automobiles
Completed training as a skilled manual automotive engineering worker and further education are necessary/li>
Specified special tools are essential
The latest drivers must be installed for WSM-Online
WSM Online is started. Please do not continue until the status is at green:
Start

Fig.2

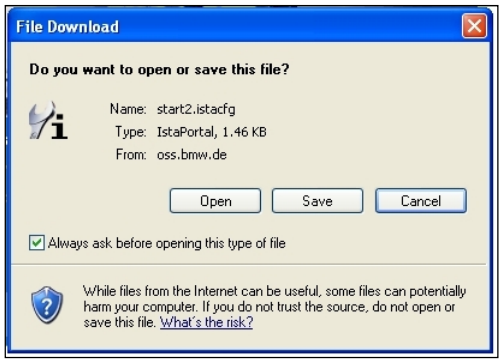
File Download
Do you want to open or save this file?
Name: start2.istacfg
Type: IstaPortal, 1.46 KB
From: oss.bmw.de
Open
Save
Cancel
Always ask before opening this type of file
While files from the Internet can be useful, some files can potentially harm your computer. If you do not trust the source, do not open or save this file. What's the risk?

Fig.3

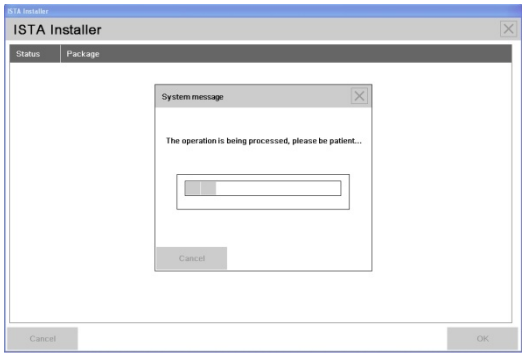

Fig.4

To complete the ISTA installation:

Click the “ISTA” link (fig.1).

The OSS portal window will open.

Wait for the status box to turn green (fig.2).

Click Start.

The ISTA dialog box will appear (fig 3).

Select Open.

The ISTA installation process will begin (fig 4).

To check installation process, you can observe the size of the ISTA directory ("C: \

Program Files \ ISTA") - it must continuously increase to over 800 MB. If the directory does not increase, or has stopped for more than a few minutes, you can cancel the installer (if necessary with the task manager), reboot the PC, log back into the website and click the ISTA link to continue the installation.

NOTE

Approx. 900MB of data will be downloaded to your PC during the first installation. This process can take several hours to complete depending on the speed and quality of your internet connection.

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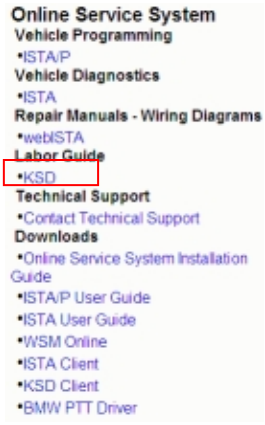
Refer to the ISTA User Guide for additional information

3.3.7 KSD Installation

Download the KSD Client software

Double click the KSD_webclient.msi file to begin the installation

Follow the installation wizard to complete the installation



Click the KSD link to start the KSD application

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4 Frequently Asked Questions

- **I have an error during the installation or operation of ISTA, ISTA/P, or KSD2. How do I contact support?**
  - Use the “Contact Technical Support” link found in the OSS section of the website to submit a support request. A support representative will contact you via telephone to resolve the error.
  - **The “Contact Webmaster” link and tech@bmwna.com email address are for subscription/payment questions, enabling code requests, and general information requests only. OSS technical support questions are required to be sent to OSS technical support. Failure to do so will delay the treatment of your support request.**

- **Will my programming session end if my subscription expires?**

  Once you begin a programming session it will not automatically end if your subscription time elapses.

- **ISTA/P is requesting an activation code or part number during programming**
  - Send an email to tech@bmwna.com with the following information:
    - Name
    - Email address
    - VIN number
    - A description of the work performed
- **How do I remove the ISTA Client?**

  To remove the ISTA client, it is necessary to use the ISTA uninstall application:

  - Start --> Programs --> ISTA --> Uninstall ISTA

  Please note that running the ISTA uninstall wizard from the Control Panel (Add or Remove Programs) does **not** completely remove ISTA!

- **Why has my ICOM been frozen for several minutes?**
  - Firmware update in progress. Identifiable by the red light on the ICOM.

- **KSD2 is not working in Windows Vista**

  Problem caused by Internet Explorer 7:

  - Internet Options
  - Advanced
  - Uncheck the "Check for server certificate revocation" checkbox
  - Restart

- **ISTA/P will not update to the latest software version**
  - Navigate to the folder: C:\WINDOWS\system32\drivers\etc
  - Open the hosts file using notepad
  - Delete the line: 160.46.247.210 oss.bmw.de
  - Save changes and close

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- **I currently have WSM Online installed. How do I upgrade to the OMS software?**

  As of 7/12/11 the WSM Online application will no longer be supported and is replaced by the OMS application. The OMS application provides enhanced operation of the OSS applications.

  In addition to the OMS software there is also a new BMW PTT driver and new ICOM firmware. Your PTT or ICOM software must be updated to use the OMS.

  It is not necessary to uninstall WSM Online. The new components will uninstall the old versions.

  To install the new components, please follow these for steps:

  1. BMW-PTT driver: download and install bmwptt_3.0.3.38.exe
  2. ICOM firmware: download and install the ICOM-2.90.81.msi
  3. OMS: download and install the OMS-OSS-1.2.1.1.msi
  4. Restart your pc

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